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Securing Monetary and Financial Stability: Why Canada Needs a Macroprudential Policy Framework

A newly created Macroprudential Policy Framework with clear objectives, tools and lines of responsibility could offer greater assurance of financial stability, while leaving the Bank of Canada to focus primarily on inflation and output stabilization.

Paul Jenkins and David Longworth

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The Study In Brief

Canada's inflation-target agreement between the government and the Bank of Canada is up for renewal by 31 December 2016.

In the aftermath of the 2008-2009 global financial crisis, one of the critical issues for consideration is the integration of price and financial stability in the conduct of policy. This *Commentary* addresses the importance for the conduct of monetary policy of having a separate coherent framework for macroprudential policy – designed to prevent the build-up of systemic, or system-wide, financial risks. A key lesson of the financial crisis was the insufficient attention being paid to these risks and their consequences for the economy.

The importance of this issue can be seen in two ways. The first relates to the interactions between monetary and macroprudential policy tools in light of concerns about rising levels of household debt. At various times, there will be situations when only one policy tool is needed, when both policies need to be used in the same direction, or when the two policies need to work in opposite directions. The second relates to the Bank's current "risk management approach" to monetary policy. In the absence of a government framework for the active use of macroprudential tools, this approach implies that monetary policy becomes a more important line of defence against systemic risks than it needs to be, with the risk of sub-optimal monetary policy outcomes.

Our conclusions are threefold:

- Canada's 2 percent inflation target and policy framework has served the economy well, most importantly in anchoring inflation expectations;
- over the past two years, Canadian monetary policy would have been better placed to combat low inflation and excess capacity had macroprudential policies been openly geared to reducing the systemic risks associated with rising household indebtedness and housing prices; and
- drawing on best practices, the government needs to elevate macroprudential policies by establishing clear objectives, tools and lines of responsibility and accountability.

The payoff for Canadians cannot be overstated: greater assurance of both financial stability, as a result of assigned responsibility for macroprudential policy, and monetary stability, as a result of the Bank of Canada's continued primary focus on inflation and output stabilization.

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The integration of financial stability considerations into the conduct of monetary policy has become an important issue in all countries. In Canada, how best to integrate price stability and financial stability is one of the central issues the Bank of Canada has identified in the lead-up to the 2016 renewal of the inflation-target agreement with the federal government (Côté 2014).

Inflation targeting was introduced in Canada in 1991. After nearly 20 years of high and variable inflation, with the Consumer Price Index (CPI) rising at an annual average rate of over 7 percent, the government and the Bank of Canada jointly announced an explicit target path for reducing inflation to levels considered to be consistent with overall price stability. Since then, Canada has had an explicit inflation target that has been extended or renewed five times (Appendix A provides a brief history of the inflation-target renewal process).[1]

At the time of the 2011 renewal, the Bank of Canada, as it did in 2006, recognized the need for flexibility in the conduct of monetary policy to play a role in support of financial stability. This flexibility has been expressed in terms of the period over which the inflation target is achieved, potentially involving a longer period to support financial stability objectives. Nonetheless, monetary policy is seen as "the fourth line of defence" (Poloz 2014, 7) behind (i) the behaviour of individual borrowers and financial institutions; (ii) regulatory oversight of financial institutions; and (iii) macroprudential policy.

This *Commentary* addresses why it is important for the conduct of monetary policy to have a complementary, coherent framework for macroprudential policy. We address two aspects of this issue that have immediate and practical implications for Canadian monetary policy. The first relates to the interactions and spillover effects of monetary and macroprudential policy.

Depending on economic and financial conditions, there will be situations when only one policy tool is needed, when both policies need to be used in the same direction or when the two polices work in opposite directions. This means policymakers need to understand not just the use of each policy, but also what guides its use. Moreover, much of the impact of policies works through expectations, which are heavily influenced by the guiding frameworks.

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1 One of the distinguishing features of the renewal process has been the consistency in agreement to keep the target at an annual rate of increase in the CPI of 2 percent. Over the period from December 1995 to December 2014, annual CPI inflation averaged 1.9 percent.

The second issue relates to the Bank of Canada's current risk-management approach to monetary policy (Poloz 2014, 2015). This approach implies that, as in the past couple of years, when active macroprudential policy is little used and when there is no guiding framework, monetary policy becomes a more immediate line of defence against systemic financial risks than it needs to be, with exposure to greater risk of suboptimal outcomes in missing the inflation target and compromising monetary stability.

Our conclusions are threefold:

- Canada's 2 percent inflation target and policy framework have served the economy well, most importantly in anchoring inflation expectations;
- over the past two years, Canadian monetary policy would have been better placed to combat low inflation and excess capacity had macroprudential policy been openly and transparently geared to reducing the systemic risks associated with rising household indebtedness and real housing prices; and
- drawing on best practices, the federal government needs to elevate macroprudential policies by establishing clear objectives, tools and lines of responsibility and accountability.

Why Macroprudential Policy Is Important

Two key lessons of the global financial crisis of 2008–09, among many, were that regulators and supervisors paid insufficient attention to the buildup of systemic risks in the financial sector, and that price stability does not guarantee financial stability. In turn, these two lessons – in conjunction with a close examination of market failures[2] – underlie the arguments for macroprudential policy to deal with these risks and promote financial stability.

Macroprudential policy can address both the time dimension and the cross-sectional dimension of systemic risk (CGFS 2010), both of which were present in the run-up to the financial crisis. The time dimension of systemic risk refers to the buildup of risks associated with the financial cycle or credit cycle. In the run-up to the global financial crisis, these risks related to the rapid growth in many countries of total credit, residential mortgage credit, especially US subprime mortgage credit, and house prices in real terms (that is, relative to the general level of prices). Rapid credit growth was associated with a significant rise in the leverage of banks in many countries, as their assets rose relative to capital. As well, there was a general increase in the indebtedness of households relative to their incomes.

The cross-section dimension of systemic risk refers to the point-in-time interconnectedness among financial institutions and markets, as well as to the nature of their common exposure to various credit, market and other risks. During the global financial crisis, large international banks had multiple sizable interconnections through their participation in the interbank (deposit) market and the repo market – where collateral included securitized instruments, with many of those instruments based on US residential mortgage assets. In addition, many of these banks were exposed to credit risks in the same residential (often subprime) mortgage markets, to market and liquidity risks related to securitized products and to counterparty risks related to AAA-rated insurance companies, such as AIG and monoline insurers,

2 The relevant market failures are those driven by strategic complementarities (herding), leading to the buildup of vulnerabilities in an expansion; fire sales; and interconnectedness, leading to a risk of contagion (Favara and Ratnovski 2014).

which focused on providing credit protection on financial products.

Although the objective of macroprudential policy is overall financial stability, some observers (for example, Barwell 2013) have distinguished between an objective of financial system resiliency, on the one hand, and an objective of credit smoothing, on the other. The former would focus on the ability of the financial system to continue to offer key services after a shock – an unexpected change in some aspect of the economy. The latter would focus on smoothing the financial cycle so as to improve economic efficiency by dampening booms and busts in investment and asset prices.

Implementing a macroprudential approach to prudential regulation typically initially leads to a one-time, structural change in the stringency of requirements for bank capital (relative to total and/or risk-weighted assets) and for liquidity, as well as restrictions on certain interconnections among banks. Decisions about these were made in the Basel III international accord on banking regulation, and in some countries they have been augmented by further domestic regulation.

In addition, active macroprudential tools are being introduced that recognize that the source and nature of systemic risks can change over time. Active macroprudential tools to address time-dimension risks include the countercyclical capital buffer, changes in required risk weights for assets (in the calculation of risk-weighted capital ratios), changes in required leverage ratios, changes in liquidity requirements and changes in required credit conditions (such as loan-to-value ratios and debt-service-to-income ratios) for certain types of loans, especially mortgages.

Active macroprudential tools to address cross-section-dimension risks include capital requirements related to the contribution to systemic risk brought to the system by an individual bank.

In practice, active macroprudential policy would need to tighten to prevent financial crises when risks are building, as in periods of boom, and to ease when risks crystallize and a financial crisis appears imminent. In contrast to monetary policy, which in normal times is implemented through one instrument – the policy interest rate[3] – active macroprudential policy draws on a number of instruments to deal with the proximate sources of rising systemic risk (market failures). Table 1 lists those active macroprudential tools that have been used, or that have been proposed, in advanced economies.

Among the possible active macroprudential tools are those that focus on signals coming from aggregate credit growth. Resiliency against risks associated with rapid credit growth would be increased by raising required bank capital relative to risk-weighted assets or unweighted assets (simple leverage ratio). To the extent that increases in bank capital requirements raise the cost of bank funding, interest rates on loans would rise and contribute to credit smoothing as well. In addition, there could be time-varying levies (taxes) on (new) credit.

Active macroprudential tools can also focus on signals coming from sectoral credit growth, through varying the risk weights for the calculation of required bank capital or by requiring that certain minimum credit conditions be met – typically for mortgages or other collateralized borrowing. Active tools can also respond to liquidity conditions, thus leading to the establishment of time-varying

3 Even in abnormal times, when unconventional monetary policy in the form of forward guidance or asset purchases is used, the emphasis is typically on the effects on the term structure of government and private-sector interest rates.

Table 1: Possible Active Macroprudential Tools for Advanced Economies

Focus		
Aggregate Credit Growth (or Balance Sheet Size)	**Sectoral Credit Growth**	**Liquidity**
Time Series Dimension		
Countercyclical capital buffer (Basel)	Time-varying risk weights (BoE, EU)	Countercyclical liquidity requirements (EU, Europe)
Countercyclical simple leverage ratio (BoE, Europe)	Credit conditions (loan-to-value ratio, debt-to-income ratio, debt-service-to-income ratio) (BoE, Europe)	Time-varying reserve requirements (remunerated or unremunerated)
Time-varying levies on credit	Time-varying loss-given-defaults for calculation of risk-weighted capital (EU)	Time-varying levies on short-term deposits
		Time-varying (countercyclical) repo haircuts
Cross-section Dimension		
Systemic capital surcharges (Basel)	Time-varying risk weights on financial counterparties (BoE)	
Systemic leverage ratio surcharges (BoE, EU)		

Note: Terms in brackets indicate that there is a framework in place to suggest the use of the tools. Basel denotes Basel III; BoE denotes Bank of England Financial Policy Committee; EU denotes under European Union legislation; Europe denotes a possible policy tool suggested for EU members by the European Systemic Risk Board.

Sources: Authors' compilation, based on Bank of England (2014, 2015a,b); European Systemic Risk Board (2014); Longworth (2010, 2011); and Lim et al. (2011).

liquidity requirements. These include aggregate liquidity (based on the two Basel III requirements), required reserves at the central bank, whether remunerated or not, levies (taxes) on non-core funding such as wholesale short-term deposits and requirements for minimum haircuts, which provide the extra collateral protection to cover credit and market risks in repo transactions (CGFS 2010; Longworth 2010).

The settings of cross-sectional macroprudential tools will also change over time, whether for individual banks, under the systemic capital surcharges in Basel III, or for risk weights on non-bank financial counterparties.

In many ways, macroprudential policy is still in its infancy, with much left to be learned. Still, there has been valuable experience with the use of many of macroprudential policy tools, especially since 2000. International Monetary Fund (IMF) studies – such as Cerutti, Claessens, and Laeven (2015); Claessens, Ghosh, and Mihet (2014); and Zhang and Zoli (2014) – have shown the effectiveness of

several tools, especially those related to the credit conditions for obtaining mortgages or mortgage insurance.[4]

The Interaction of Macroprudential and Monetary Policy

Monetary policy and much of macroprudential policy are essentially countercyclical policies. In normal times, monetary policy is the major tool for reducing the amplitude of business cycles, including cycles in inflation.[5] In such times, monetary policy has been shown to have major advantages relative to active countercyclical fiscal policy (Dodge 2002). In comparison, as discussed above, macroprudential policy is more related to dampening the financial cycle – including cycles in credit, credit conditions and liquidity – or to increasing the resiliency of the financial system to these cycles.

Put another way, monetary policy should target price (and output) stability, while macroprudential policy should target financial stability. With two targets, it is appropriate to have two instruments, or classes of instruments,[6] and to assign the targets in that way. The various cycles that make up the financial cycle are both positively correlated among themselves and positively correlated with the business cycle. A typical financial cycle, however, is much longer than a typical business cycle (Drehmann, Borio, and Tsatsaronis 2012).

As both monetary and macroprudential policy lean against cycles, and as those cycles are positively correlated, in most periods they will reinforce each other. For example, in a boom in output and credit, monetary policy will be tightened to keep inflation from moving above the inflation target, while macroprudential policy will be tightened – for example, through the countercyclical capital requirement – to raise the amount of capital that banks have to cover their risks and/or to slow the growth of credit.

At times, however, credit might be expanding rapidly well before output rises to potential and inflation returns to target from below. In these cases, macroprudential policy might be tightened, while monetary policy remains loose or eases even further. As well, if credit growth is concentrated in particular sectors, there might be a greater case for tightening sectoral macroprudential policy than for tightening aggregate ones.

In general, it is clear that each policy needs to take into account any side effects it has on the targets of the other policy (IMF 2013). This is similar to monetary and fiscal authorities knowing what the other is doing. When the federal government changes fiscal policy, it needs to understand the demand, inflation and interest-rate implications, and similarly for the Bank of Canada. It is to the mutual benefit of both to share information about and analysis of their policies.

Another aspect of the relationship between active macroprudential and monetary policy is the optimal response of these policies to various types of shocks, when the "distortions" or "frictions" associated with market failure are the ones typically assumed to be important. The major types of shocks are considered to be demand shocks, financial

4 Many countries' experiences so far have involved only movements of the policy tool in one direction.

5 In abnormal times, when the economy is operating at the effective lower bound for nominal interest rates, monetary policy – of the unconventional variety – is still likely to be the most effective policy tool. However, it typically should be supported by expansionary fiscal policy. Moreover, there is an argument to set macroprudential instruments looser than normal, especially if the need to operate at the effective lower bound is because of financial crisis.

6 This is often known as Tinbergen's Law.

Table 2: Optimal Policy Response to Shocks (in the Theoretical Literature) Given Typical Assumptions about "Distortions"

Shock	Monetary Policy Response	Macroprudential Policy Response
Demand shock	Yes, alone (if stabilizes both inflation and output)	Generally no
Financial shock	Generally no (too blunt an instrument)	Yes (targeted at specific financial distortion).
Productivity shock, with borrower collateral constraints	Yes, alone	No
Productivity shock with endogenous financial distortions from bank lending	Yes, with response to inflation as in the case without such distortions	Yes, with tighter policy to rein in credit as bank lending affects systemic risk

Sources: IMF (2013); authors' compilation.

shocks and productivity shocks. Table 2 summarizes the findings of a recent IMF examination of the optimal responses in the theoretical literature.

It is clear that monetary policy should be the key policy in responding to demand and productivity shocks. In comparison, financial shocks should be handled by macroprudential policy instruments targeted at specific financial distortions, because monetary policy is too blunt an instrument. In the case of productivity shocks with endogenous financial distortions (when buoyant financial markets affect the riskiness of lending), macroprudential policy is likely to be important alongside monetary policy.

However, when macroprudential tools are imperfect, when financial sector distortions are difficult to correct, in part because of unregulated areas, and when monetary policy is at the zero lower bound the case for monetary policy's augmenting macroprudential policy in dealing with financial shocks is strongest (Stein 2013). The implication is that, in normal times, the better macroprudential policy is, the less appropriate it is to use monetary policy to deal with financial stability issues.

Without a framework for macroprudential policy that lays out which macroprudential tools are to be used to deal with particular types of financial shocks, there is the risk that governments, as well as the public, will look to the central bank to use its monetary policy tools to deal with them even when that clearly would be suboptimal. Such risks become increasingly unavoidable in the absence of a body assigned to vary active macroprudential tools.

Credibility problems for the central bank easily could arise in such circumstances when there is lack of clarity about the macroprudential framework. Poor outcomes or lack of action could be blamed on the central bank when they properly should be attributed to a poor framework or poor implementation of macroprudential policy by the relevant authority.

Moreover, clearly framed macroprudential policy, both structural and active, by containing financial risks, eases the burden on monetary policy in normal times, and reduces the probability that monetary policy will have to operate at the effective lower bound on interest rates (IMF 2013).

Expected Policy

Given the interactions and spillovers described above, it is clear that policymakers in one domain must take into account recent and expected future policy moves in the other domain. Consumers and businesses will also be taking into account expected future policy moves. Indeed, one could argue that it is the "preemptive" policy design that does most of the work in achieving policy objectives in the first place – it has, for example, stabilized medium-term inflation expectations in Canada.

In the formation of expectations, whether on the part of policymakers or consumers and businesses, it is important to have a clear policy framework to draw on – one that spells out objectives, instruments and indicators/analysis – as well as supporting communications. In the case of Canadian monetary policy, all these are present, provided through the inflation-targeting agreement between the Bank of Canada and the federal government, background documents issued by the Bank at the time of target renewal, press releases announcing monetary policy decisions, Monetary Policy Reports and speeches and research articles.

In contrast, there is almost nothing available on a framework for macroprudential policy in Canada, with the sole exception of the countercyclical capital buffer. As a result, it is difficult for the Bank of Canada to know in advance what macroprudential policy instruments are likely to change over the coming year. Since there is no single, easily observable or quantifiable target for systemic risk, it is even more important to have a framework within which to assess, conduct and communicate macroprudential policies.

Since 2008, the federal government has tightened mortgage insurance requirements four times (Bank of Canada 2012, 24), through lowering various loan-to-value ratio maximums, shortening maximum amortization periods and lowering relevant debt-service-to-income ratio maximums. The absence of a formal framework for this set of de facto macroprudential policy instruments means that it is not clear if these adjustments were part of a slow process toward an appropriately tighter long-run level for the requirements, or if some of them should be seen as a countercyclical tightening that might turn into a loosening when mortgage credit growth becomes very low and/or housing prices fall (Longworth 2014).

The Current Canadian Context

The global financial crisis vividly demonstrated that the financial system can be both a source and a propagation mechanism of shocks, with severe consequences for the real economy in terms of, first, overinvestment in certain sectors, such as housing, and then lost output, employment and incomes. Indeed, as we discussed above, whether through policy transmission channels from the financial to the real sectors of the economy or through consequential spillover effects, financial stability considerations need to be factored into the conduct of monetary policy.

In practical terms, what does this mean?

The debate has centred on two approaches. One argues that monetary policy must play a more active and deliberate role in "leaning" against financial booms such as excessive credit growth and ease less aggressively during busts (Borio 2014). The alternative view, while recognizing that economic and financial stability are inextricably linked, puts the focus on clear assignment of responsibility. In this view, the paramount goal of monetary policy remains price stability, with macroprudential policy predominant in dealing with systemic financial risks.

It is this second approach that the Bank of Canada endorsed in its 2011 inflation-target renewal background document. The Bank of England has gone the farthest in this direction with the establishment of a separate policy framework for the conduct of macroprudential policy that includes objectives, instruments, transparency and accountability. In Canada, the framework for macroprudential policy is far from clear, which

presents a serious constraint on the Bank of Canada's conduct of monetary policy. The current situation facing the Canadian economy provides ample evidence.

With the global economy still reeling from the aftermath of the global financial crisis and, more recently, from the precipitous drop in oil prices, the Canadian economy has continued to need accommodative monetary policy. Indeed, the Bank of Canada lowered its overnight policy rate by 25 basis points to 0.75 percent on January 21, 2015. In taking this action, the Bank argued that the fall in oil prices was "unambiguously negative for the Canadian economy."[7]

Although justified in terms of countercyclical demand-management policy and achieving the inflation target, this cut posed a potentially serious dilemma for the Bank in adding to the vulnerabilities and risks of an already-elevated level of household indebtedness. For some time, the Bank has been escalating its concern about these risks for the stability of the Canadian financial system. In its December 2014 and June 2015 semi-annual Financial System Reviews (Bank of Canada 2014, 2015), it evaluated the impact of risks associated with household financial stress and a sharp correction in house prices at the highest level among the risks assessed by the Bank's Governing Council. At the time of its January interest-rate announcement, the Bank acknowledged that the rate cut could add to the risks associated with household debt levels, but argued that the risk for household debt arising from declines in employment and incomes as a result of the oil price shock was higher.

The Bank of Canada's current risk-management approach to monetary policy discusses financial stability issues in terms of the financial risks that must be "taken into account" in the setting of policy (Poloz 2014, 2015). Although this approach gives weight to macroprudential risks, from the perspective of overall economic well-being it does not go far enough to ensure a more complete integration of the identification and management of systemic risks into the conduct of both macroprudential and monetary policy.

With active macroprudential policy rarely used and no framework to guide its future use, the Bank of Canada has had to take the current settings of macroprudential tools, as well as the current starting points for the economy and financial stability risk, as given. Thus, the Canadian economy has had only one tool – the policy interest rate – to deal with two objectives: keeping financial stability risk at a "normal" (or "reasonable") value,[8] and keeping the expected future medium-term inflation rate at the 2 percent inflation target.

Poloz (2014, figure 1) illustrates the constraints the Bank has faced in such a situation – as it did during most of 2013 and 2014. With one policy instrument, the Bank could have chosen:[9] (i) to react only to financial stability risk, set the policy interest rate higher and reduce financial stability risk to normal; (ii) to react only to factors affecting the projected path for inflation, set the policy interest rate lower and achieve the inflation target in the medium term; or (iii) to aim for the "neutral zone" defined by the Bank, which balances financial stability risk and the expected inflation outcome or

7 Opening Statement, Stephen Poloz, press conference for release of the Monetary Policy Report, Jan 21, 2015.

8 We interpret below-normal financial stability risk as a situation where, given existing financial and economic conditions, financial regulations (including the settings of macroprudential tools) are so tight that costs in terms of economic efficiency outweigh the benefits of lower financial stability risk.

9 Appendix B uses a variant of the figure in Poloz (2014) to illustrate, in a rough-and-ready manner, these choices for a given fixed macroprudential policy and set of initial financial and economic conditions. The appendix also illustrates the possible outcomes when an optimal macroprudential policy framework is in place.

inflation risk. As Poloz (2015) describes, the Bank has been pursuing the third of these options.

In the presence of a set of active macroprudential tools and a framework to describe their use, the macroprudential authority would focus on keeping financial stability risk at a desired level – thus, in normal times, freeing the Bank of Canada to focus on achieving the 2 percent inflation target in the medium term of two years or so, not just over the longer run.

Frameworks, Authority to Act and Governance

Since the global financial crisis, many countries have created macroprudential authorities, in the form of committees or individual institutions. Of the 34 countries surveyed by Haldane (2013), 23 had established committees that could take significant action (see Table 3). Of these, in 14 cases – including the United Kingdom, with its Financial Policy Committee (FPC) at the Bank of England – the authority lies with the central bank. In 5 cases, committees have been established essentially for coordination among multiple regulatory agencies, including the Financial Stability Oversight Council (FSOC) in the United States. In Canada, the Senior Advisory Committee, which is not established in legislation, acts informally.[10] In the European Union, the European Systemic Risk Board (ESRB) – a supranational body, and therefore not part of the numbers in Table 3 – is a committee for coordination; it can also recommend that other regulators and the European Union itself undertake appropriate macroprudential policy.

Legislation in place in the European Union, the United Kingdom and the United States has established the objectives, responsibilities, tools and other powers of the relevant committees (Table 4). In addition, the committees typically have established an indicator framework to guide their decision-making. Also spelled out in legislation is the governance structure of the committees – including the chairperson, the voting (and nonvoting) members, the relationship with government and other regulatory bodies and accountability to legislatures and the public. Canada has no comparable legislation, and has been criticized by the IMF (2014) for weaknesses in its informal system.[11]

The model of the Bank of England's FPC is perhaps the most useful for judging what type of framework should be put in place in Canada. The FPC's objective is the stability of the UK financial system, and its responsibilities include the removal or reduction of systemic risk. To meet its responsibilities, the FPC has been granted specific tools by the UK Parliament (see Table 5).[12]

For each tool, the FPC has spelled out a complete framework describing how the committee plans to use it and specific "core indicators" that will help to guide its use (Bank of England 2014, 2015a,b). At times, the FPC works closely with the Bank of England Monetary Policy Committee,

10 The Senior Advisory Committee is chaired by the deputy minister of finance and includes the Bank of Canada, the Office of the Superintendent of Financial Institutions, the Canada Deposit Insurance Corporation and the Financial Consumer Agency of Canada.

11 The IMF notes that, "[w]hile the current informal system has worked well, it could be enhanced by clearly assigning the mandate to a single body for monitoring systemic risk to facilitate macroprudential oversight. No single body has the mandate for macroprudential oversight nor do any of the oversight committees have the membership that would allow for a comprehensive view of systemic risk across all financial institutions and markets in Canada" (IMF 2014, 25).

12 In practice, this means that the FPC can direct the use of these tools by the Prudential Regulatory Authority and Financial Conduct Authority.

Table 3: Macroprudential Governance Frameworks, by Number of Countries, 2013

Type of Committee	Authority		
	Central bank	*Multiple agencies, including finance ministry*	*Multiple agencies, not including finance ministry*
Committee for action	14 (+1*) (including United Kingdom)	8	0
Committee for coordination	0**	4 (including Canada and United States)	1
No committee	2	1***	3***

Note: Total number of countries surveyed: 34.

* The additional country is Finland, where there is a single authority with a committee for action, but it is housed in the banking supervisor.

** If the European Union were a country, it would belong in this cell.

*** The multiple agencies have distinct responsibilities.

Sources: Haldane (2013, table 2); authors' compilation.

which involves the sharing of all relevant information, briefings and analysis with members of both committees (Carney 2014).[13]

In strong contrast to the FPC, the FSOC in the United States has limited tools at its disposal, and has become part of a somewhat unwieldy regulatory system with an extremely large number of regulators, which could dilute its will to act.

The FPC, the ESRB and the FSOC all have clear governance structures. As part of these structures, the committees include the relevant regulators of financial institutions and markets, as well as a representative of the government (whether in a voting or nonvoting capacity). Jenkins and Thiessen (2012) recommend a governance structure for Canada that would involve establishment of a committee in legislation with formal responsibility for macroprudential policy and the necessary powers to take action (see Appendix C).

The 2016 Inflation-Target Renewal

Appropriate and robust assignments of responsibility and accountability are a critical part of the effective functioning of an economy. Canada's inflation-target monetary policy framework has served Canadians well in providing certainty about the direction of policy, thereby anchoring expectations to the 2 percent target, and in responding symmetrically to shocks, both small and large. Four criteria form the basis of this framework:

- a clear and achievable objective;
- effective tools capable of meeting the policy objective;
- an agency responsible for policy implementation with the authority to take measures needed to achieve the objective; and
- a well-defined process of accountability for the responsible agency.

13 The governor and two deputy governors of the Bank of England are members of both committees.

Table 4: Macroprudential Frameworks and Governance Structures, European Union, the United Kingdom, and the United States

	European Union	United Kingdom	United States
	Macroprudential Body		
	European Systemic Risk Board	**Financial Policy Committee**	**Financial Stability Oversight Council**
Framework			
Objective	Contribute to prevent/ mitigate systemic risks; help safeguard the stability of the financial system, including by strengthening its resilience	Protect and enhance the stability of the UK financial system	Identify threats to financial stability and respond to emerging risks
Responsibilities	Macroprudential oversight of the financial system	Systemic risk identification, monitoring and removal or reduction	Information sharing and coordination
Tools	None directly; European rules give national authorities several active macroprudential tools	Extra risk-weighted capital requirements, leverage tools, housing tools	Monitoring; certain limited types of rulemaking.
Other Powers	Issue warnings and recommendations on a "comply or explain" basis	Make recommendations	Make recommendation to Congress; recommend stricter standards for "systemically important financial institutions"
Indicators	Risk dashboard	"Core indicators" specific to each tool	Work with Office of Financial Research
Governance			
Housed in	European Central Bank (ECB)	Bank of England (BoE)	Treasury
Chaired by	President, ECB	Governor, BoE	Secretary of the Treasury
Voting members	38: 2 from ECB, 28 central bank governors; 3 European regulators, 1 from European Commissions, 4 others	10: 5 from BoE, 1 from Financial Conduct Authority (FCA), 4 external	10: 1 Secretary of the Treasury; 1 Fed chair; 7 federal regulators; 1 insurance expert
Relationship with other bodies	Can issue warnings or recommendations to EU or to regulatory authorities	Give certain directions to Prudential Regulatory Authority and FCA; make recommendations to them and Treasury; works with BoE Monetary Policy Committee	Coordination among member regulators. Authority to direct information collection by Office of Financial Research
Accountability	European Parliament and public	UK Parliament and public	US Congress and public

Sources: Authors' compilation; Bank of England (2014, 2015a,b); Bank of England, Financial Policy Committee website, available at http://www.bankofengland.co.uk/financialstability/pages/fpc/default.aspx; Barwell (2013); Carney (2014); European Systemic Risk Board website, available at https://www.esrb.europa.eu/home/html/index.en.html; Financial Stability Oversight Committee website, available at http://www.treasury.gov/initiatives/fsoc/Pages/home.aspx; and Sharp (2014).

Table 5: Bank of England Financial Policy Committee's Powers over Specific Tools

Tools to Supplement (Risk-weighted) Capital Requirements	Leverage Ratio Tools	Housing Tools
• Countercyclical capital buffer • Sectoral capital requirements o Residential property, including mortgages o Commercial property o Other parts of the financial sector	• Countercyclical leverage ratio buffer • Supplementary leverage ratio buffer for systemically important banks	• Loan-to-value ratios • Debt-to-income ratios • Interest coverage ratios (for mortgaged rental housing)

Sources: Authors' compilation; and Bank of England (2014, 2015a,b).

A similar set of criteria should form the basis of a framework for macroprudential policy in Canada, and thus create strong incentives to act. Additional desirable criteria for a macroprudential framework would be the power to require information for systemic risk purposes from all financial institutions and infrastructures (whether or not they are currently federally regulated), and the requirement that the agency publish a framework for the use of each of its tools, including the indicators that would be used to guide this use.

Although much remains to be learned about the best way to conduct macroprudential policy, the presence of a framework embodying these criteria, especially a clear objective, would maximize the effectiveness of "learning by doing" – just as such criteria did for inflation targeting, especially in the 1990s.

With two coherent frameworks, the instruments of policy would be assigned on the basis of their comparative advantage in meeting the stated policy objectives: price stability on the one hand, and financial stability on the other. Equally important, however, with these frameworks and assignments in place, each set of policies would be able to factor in the actions of the other policy and what is guiding those actions.

As we have discussed, these interactions can enhance or reduce the effectiveness of each policy. Seen this way, two frameworks working side-by-side would enhance overall policy effectiveness in a transparent manner and greatly reduce uncertainty about policy. With both monetary and macroprudential policy frameworks in place, grounded by the criteria presented above, Canadians could be confident in the authorities' commitment to monetary and financial stability. For policymakers, being able to exercise "constrained discretion"[14] within a clearly defined policy framework would strengthen policy credibility and legitimacy. The alternative – which is what we currently have in Canada – risks misjudgment and

14 Constrained discretion typically refers to a situation where it is preferable to delegate decision-making to an independent institution that will implement policy period by period, exercising discretion within a clearly defined policy framework.

policy errors. In addition, effective communication becomes difficult, leading to the risk of misunderstanding among Canadians and dislodging their expectations about policy outcomes.

What does this mean for the 2016 renewal of the inflation target? A clear macroprudential policy framework, drawing on the practices of other countries, is needed – one that has clarity of objectives, transparency and accountability – if monetary policy is to continue to deliver good outcomes for Canadians. Ideally, prior to agreement on the 2016 renewal, the federal government would take steps to put such a framework in place. Only then could financial stability considerations truly be factored into the conduct of monetary policy.

CONCLUSION

There would be significant advantages to the Canadian economy overall, and to the Bank of Canada as the monetary authority, in having a well-formulated macroprudential policy that specifies the active macroprudential policy tools to use to limit systemic risks, and thereby to promote financial stability.

The global financial crisis showed that macroprudential policy is essential to reduce the risk of financial crises – indeed, the G20 reform agenda has been built on that premise. In response, many advanced countries have legislated macroprudential policy frameworks, including clear governance structures and specific active macroprudential tools. Canada, however, has not done so.

When appropriate active macroprudential tools are used wisely to combat systemic risks – in the context of a government-mandated macroprudential authority with a clear framework to guide current and future changes in instrument settings – monetary policy is able to concentrate on dealing with inflation risk and output stabilization, making both inflation and output less volatile than they otherwise would be. Put differently, if monetary policy focuses on what it can achieve, policy credibility is enhanced and inflation expectations remain well anchored.

Over the past two years, Canadian monetary policy would have been better placed to combat low inflation and low output had macroprudential policies been openly and transparently geared to reducing the systemic risks associated with high household indebtedness and high and rising real housing prices.

In the context of the upcoming inflation-target renewal, the Bank of Canada is again looking at the role of monetary policy in dealing with financial stability. But this role differs in: (i) the situation when active macroprudential policy is used to combat systemic risks within the context of a well-defined framework describing the use of active tools; and (ii) the situation when active macroprudential policy is little used and lacks a framework for use, making monetary policy a more important line of defence against systemic risks than it needs to be, with concomitant exposure to a greater risk of missing the inflation target.

The federal government, therefore, needs to legislate a best-practices macroprudential framework with appropriate governance. The payoff for Canadians cannot be overstated: greater assurance of financial stability as a result of the direct assignment of responsibilities for active macroprudential policy, and of monetary stability as a result of the Bank of Canada's continued primary focus on inflation and output stabilization.

APPENDIX A: A BRIEF HISTORY OF CANADA'S INFLATION-TARGET RENEWAL PROCESS

In 1991, the federal government and the Bank of Canada announced explicit targets for reducing inflation on a path to price stability. Although the timetable was not precise, the objective was to reduce total CPI inflation to 2 percent by the end of 1995.

Further reductions were then anticipated until a level of inflation consistent with price stability (to be defined) was achieved. In a background document, the Bank laid out the main technical issues in its approach to achieving the targets. Since then, the joint announcement has been extended or renewed five times, most recently in November 2011 for the period through December 31, 2016.[15]

Several common threads run through each of the inflation-target renewal processes. One is the common sense approach of learning from experience and research before judging the objectives and the operational approaches. Although the desire from the outset was to have a long-run target consistent with price stability – and thus confidence in the future value of money – it was only after 10 years of experience, in the May 2001 renewal, that monetary policy was explicitly aimed at the 2 percent mid-point of the target range. Prior to that, the focus had been on holding inflation inside the range.

Similarly, in its original 1991 background document, the Bank of Canada stressed the importance of looking through the volatile components of the CPI in setting policy. Typically, the Bank has taken the opportunity of each renewal to update its research and definition of core inflation. In addition, background documents since 2001 have documented the benefits of achieving the 2 percent target.

Even during the turbulent years of the global financial crisis, the inflation-targeting regime proved a clear and coherent framework within which the Bank could respond forcefully and in a timely way in providing aggressive monetary stimulus. These years again demonstrated the flexibility of the inflation-targeting framework to respond to shocks.

The Bank of Canada's practical, yet disciplined approach to carrying out its responsibilities is also clearly evident in its rigor in identifying and undertaking research leading up to a renewal.

This has been especially evident since the 2001 renewal, which for the first time introduced a five-year term for the joint agreement. The Bank took an additional step with the 2006 renewal by announcing a three-year concerted effort to identify what it deemed would be the key issues ahead of the next renewal in 2011: the costs and benefits of an inflation rate lower than 2 percent, and the costs and benefits of replacing the current inflation target with a longer-term, price-level target.

The Bank did indeed undertake a concerted research effort on these two issues. But, in the aftermath of the global financial crisis, it added a third area to its research agenda ahead of the 2011 renewal: how financial stability concerns should be taken into consideration in the conduct of monetary policy. In its 2011 renewal document, the Bank

15 The Bank of Canada website has a section dedicated to the 2016 renewal, with the issues clearly laid out and easy access to previous renewal announcements and background documents, as well as to the Bank's research (past and current) relevant to those issues; see "Renewing Canada's Inflation Control Agreement," at http://www.bankofcanada.ca/core-functions/monetary-policy/renewing-canadas-inflation-control-agreement/.

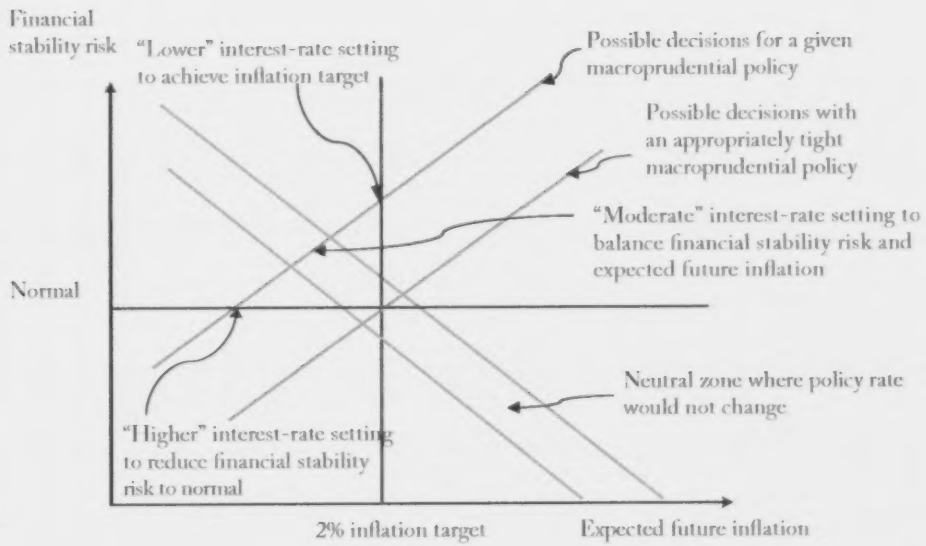
recognized, as it did in 2006, the need on occasion for flexibility in the conduct of monetary policy to play a role in support of financial stability.

This flexibility has been expressed in terms of the period over which the inflation target is achieved, potentially involving a longer horizon to support financial stability objectives. Monetary policy, nonetheless, has been seen as "the fourth line of defence" behind the behaviour of individual borrowers and financial institutions, regulatory oversight of financial institutions and macroprudential policy.

In its 2011 background document, the Bank also identified three research areas to receive particular attention over the five years leading up to the 2016 renewal: on the links between financial market developments and the economy, on the zero lower bound on nominal interest rates and on the formation of expectations. In a November 2014 speech (Côté 2014), Deputy Governor Agathe Côté added three issues to this list: the optimal rate of inflation, especially in light of a greater probability that policy would be constrained by the zero lower bound, the measurement of core inflation and the integration of financial stability considerations into the formulation and conduct of monetary policy.

APPENDIX B

Figure A1: Expected Policy Outcomes Given Policy Settings, 2013–14, with One and Two Active Policy Tools


Financial stability risk
"Lower" interest-rate setting to achieve inflation target
Possible decisions for a given macroprudential policy
Possible decisions with an appropriately tight macroprudential policy
"Moderate" interest-rate setting to balance financial stability risk and expected future inflation
Normal
Neutral zone where policy rate would not change
"Higher" interest-rate setting to reduce financial stability risk to normal
2% inflation target
Expected future inflation

Source: Authors, using a variant of figure 1 in Poloz (2014).

Appendix C: The Need for a Framework

Jenkins and Thiessen (2102) discuss four alternative macroprudential models for Canada:

- the minister of finance is given responsibility, with the current regulatory and supervisory agencies acting as an advisory committee;
- the Bank of Canada, on its own, is given responsibility;
- the current regulatory and supervisory agencies are individually given responsibility within their mandates, but they exchange information and coordinate their actions; or
- a committee made up of the current regulatory and supervisory agencies is given the responsibility and independence to function as a single body.

All four have their strengths and weaknesses, but Jenkins and Thiessen recommend the last of them. Canada, however, has yet to put such a framework in place. One explanation offered is that, because the Canadian financial system withstood the financial crisis meltdown better than most, there is no need for action. Financial institution regulation proved effective, and the oligopolistic nature of Canada's financial system is itself risk averse.

Jenkins and Thiessen make the counterargument that there is a need for strong incentives to provide expert analysis and ensure prompt action to deal with systemic, or system-wide, risks within a transparent governance structure. What exists today is opaque and uncertain. We further argue in this *Commentary* that, in the absence of a macroprudential framework, there is the risk that monetary stability will be compromised by forcing the Bank of Canada to deal with both financial and monetary stability with a single instrument.

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